

as its anterior end is from the root of the pectoral; pectoral fin not so long as the head, one fourth longer than broad at its extremity, which is scarcely emarginate; its lower edge equals about half the length of its upper; base of second dorsal hardly above half the extent of that of the first dorsal, it is above the anal and about as large as it; upper edge of caudal straight; its length is slightly more than that of the interval between its origin and the base of the ventral. *Colours*: greyish above, white below; *the upper half of the anterior two thirds of the second dorsal is deep black.*

Habitat. One specimen, 15 inches in length, taken at Pallipport, near Cochin, and two more, each 16 inches in length, at Calicut on the Malabar coast.

Calicut, January 21, 1873.

On some new Species of European Spiders.

By the Rev. O. P. CAMBRIDGE, M.A.

(PLATES XIV. & XV.)

[Read May 1, 1873.]

THE twelve spiders comprised in the following descriptions have been found almost at the extremities of Europe; two are from near Aberdeen, in Scotland, four from Corfu, two from the south of France, one from near Naples, one from Ischl, one from Bruck-am-Main, in Austria, and one from Switzerland. They belong to eleven genera, some of them widely distant from each other. Sketches are added, either of the whole or of portions of each species, from which it is hoped that the often minute, but generally satisfactory, distinctive characteristics of each species may be more easily perceived than from descriptions alone. The figures are not drawn to any particular scale; but a line is in each case added showing the natural length of the spider independently of its legs.

List of species, with references to page, Plate and figures.

- Ecobius ionicus*, ♂. Corfu. p. 531, Pl. XIV. fig. 1.
Ariadne ionica, ♂. Corfu. p. 532, Pl. XIV. fig. 2.
Clubiona voluta, ♀. Aberdeen. p. 533, Pl. XIV. fig. 3.
Dictyna lugubris, ♂, ♀. Corfu. p. 535, Pl. XIV. fig. 4.
Calotes Pickardi, ♂. Switzerland. p. 537, Pl. XIV. fig. 5 a, d.
Textrix Moggridgii, ♀. Mentone. p. 537, Pl. XIV. fig. 6.
Linyphia lepida, ♀. Dunkeld. p. 539, Pl. XV. fig. 7.

- Xysticus Pavesii*, ♂. Naples. p. 540, Pl. XV. fig. 8.
 — *defectus*, ♂. Bruck-am-Main. p. 541, Pl. XV. fig. 9.
Monastes Staintoni, ♀. Cannes. p. 542, Pl. XV. fig. 10.
Thanatus mundus, ♀. Mentone. p. 543, Pl. XV. fig. 11.
Philodromus torquatus, ♂. Corfu. p. 545, Pl. XV. fig. 12.

Family GECOBIIDES.

Genus GECOBIVS, Luc.

GECOBIVS IONICUS, sp. n. Pl. XIV. fig. 1.

Adult male, length slightly more than 1 line.

In general appearance, form, and structure this species is of the ordinary type, except that the caput is rather more roundly convex than usual. The *cephalothorax* (looked at from above) is circular, with a very straight prominent point at the middle of the fore margin; its colour is yellowish, margins black, and a longer black patch on each side of the prominent point mentioned above, with some other blackish markings on the clypeus, which projects forwards and in height equals half that of the facial space; the occiput has two blackish streaks, which converge to the thoracic junction in a blackish spot.

The *eyes* are eight in number, and form a nearly square figure, in two parallel curved rows, or four pairs, of which the respective eyes are contiguous to each other and placed obliquely; the inner eye of each of the two hinder pairs is, as usual in this genus, of an oblong form and flattened, looking like a mere shining surface, but is evidently an atrophied eye; the outer eye also of each of the two fore pairs is of an irregular form; the outer eye of each hinder pair appeared to be the largest of the eight and darkest-coloured, and strongly margined with black on its inner side; the inner eyes of the fore pairs are also dark, and placed on a strong black patch; the rest are pearly white.

The *legs* are rather long, tolerably strong, their length not very different; relatively it appeared to be (though this could not be ascertained with certainty) 2, 1, 4, 3; they are of a rather paler yellow colour than the cephalothorax, sparsely and obscurely marked with brown blotches or broken bands, and furnished pretty thickly with hairs (coarse bristly ones and others) and a few spines. Each tarsus ends with a supernumerary or heel-joint bearing three claws.

The *palpi* are similar in colour to the legs, except the digital joints, which are yellowish brown; they are moderately long, strong, and thickly furnished with coarse hairs: the radial and cubital joints are short and about equal in length and strength; the former has no apophyses at its extremity; the digital joints are very large, oval, and almost equal in length the whole of the rest of the palpus, or

at least exceed that of the humeral joint. The palpal organs are well developed, prominent, but not very complex, with several prominent corneous processes; but these are of a less exaggerated nature than in *Ecobius domesticus* (Luc.).

The *falces* are small and weak, and, with the labium and sternum (which are all of normal form), are similar in colour to the legs.

The *abdomen* is oval and flattish above, but projects considerably over the base of the cephalothorax, where it is somewhat truncate when looked at from above and behind; it is of a yellowish colour, clothed with coarse hairs: on the fore half of the upperside is a dentated, longitudinal, central band, faintly defined by a dusky brown marginal line, with a few other obscure blackish markings on the side of the fore part and upperside of the hinder half; some few white cretaceous spots are also visible on the upper side; the underside is of a uniform pale-yellowish colour: the spinners of the superior pair are much longer than the rest and turn upwards; in front of the normal six there is a transverse supernumerary one, or united pair: the anus has the peculiar fringe of coarse hairs observed as yet only in this and the allied genus *Uroctea* (Duf.).

A single example of this species was found by myself on the walls of my bedroom at the Hotel d'Orient at Corfu in May 1861.

Family DYSDERIDES.

Genus ARIADNE (Savigny).

ARIADNE IONICA, sp. n. Pl. XIV. fig. 2.

Adult male, length 3 lines.

The whole of the fore part of this spider (except the labium and sternum, which are strongly suffused with dark brown) is of a brownish-yellow colour, the abdomen being dull drab-yellow, strongly suffused above with a warm reddish brown, but without (at least in the example described) showing any pattern or design.

The *cephalothorax* is oval, truncate before, very slightly constricted laterally in front, and rather flattened above, the caput and thorax being of the same elevation; it is (if any thing) a little darker in colour than the legs, and is narrowly margined with dusky brown: the normal grooves and indentations are but slightly marked; the surface is glossy, but (apparently) marked thinly with small round punctures.

The *eyes* are six in number, placed in three pairs very near the fore margin of the caput; those of the central pair are contiguous to each other; and those of each lateral pair are also contiguous to each other, and placed obliquely on a tubercle, the two hind laterals being in a straight line with those of the central pair.

The *legs* are long and tolerably strong; the femora of the fourth pair being very much stronger than the rest: their relative length is 1, 2, 4, 3; and they are furnished with a few hairs, and more thickly with black spines; the greater part of these last are on the tibiæ and metatarsi of the first and second pairs; the femora of these pairs have 6, 4 of them in a single series along the uppersides; the femora of the third pair have 4, 3 of them in a single series along the uppersides; and the femora of the fourth pair have a single row of 8-10 along the undersides: each tarsus terminates with three curved claws, the two superior ones being the strongest and pectinated.

The *palpi* are moderately long; the cubital joint is very short, roundish, or nodiform; the radial is comparatively long and strong, being tumid or gouty, chiefly so towards its hinder extremity; the digital joint is of a somewhat oblong oval form, scarcely half the length of the radial, and nothing like it in strength, its concavity being also very slight. The palpal organs are simple, consisting of a large, globular, corneous, roundish bulb, with its fore extremity produced into a long, curved beak, tapering gradually to a fine point, bearing great resemblance to the palpal organs of the *Theraphosides*, and also of its nearer allies the spiders of the genus *Segestria*.

The *falces* are moderately long, not very strong, straight, but projecting a little forwards.

The *maxilla* are long and enlarged at their extremities, where they are obliquely curved on the outer sides.

The *labium* is also long and pointed at its apex, round the margins of which are some small black points or very short bristles.

The *sternum* is oval, the fore extremity being rather the narrowest.

The *abdomen* is oblong oval, of a somewhat cylindrical form, and entirely destitute of hairs; possibly these may have been rubbed off; the spinners are six, short, and situated at the lower extremity of the abdomen; those of the inferior pair are much the strongest and rather the longest.

A single adult male of this spider was found by myself under a stone near the One-Gun battery at Corfu in May 1864.

Family DRASSIDES.

Genus CLUBIONA (Latr.).

CLUBIONA VOLUTA, sp. n. Pl. XIV. fig. 3.

Adult female, length $3\frac{1}{2}$ lines.

In form, colour, and markings this spider bears close resemblance to several other British species; the colour of the cephalothorax is yellow; and it is furnished with dusky hairs, among which are a few darker ones of a bristly nature.

The *legs* are pale whitish yellow, furnished with hairs and black spines, those on the two fore pairs of legs being the longest and strongest, sessile, and arranged in pairs beneath the tibiæ and metatarsi; besides these are several on the uppersides of the femora: each tarsus ends with two claws, beneath which is a small scopula.

The *falces* are strong, slightly projecting forwards, and a little prominent near their base in front; they are furnished with a few black bristly and other hairs, and (except a small oval yellowish patch near their inner extremities) are of a rich dark yellow-brown colour.

The *maxillæ* and *labium* (which are of normal structure) are also of a deep yellowish brown, tipped with pale yellowish.

The *eyes* are nearly of the same size and placed on slight tubercles, in the ordinary position; but there is scarcely any perceptible clypeus, the fore central eyes almost touching the fore margin of the caput; the foremost row is much the shortest, straight, and equally divided by the eyes of which it is composed; the interval between those of the hind central pair is rather greater than that between each of them and the hind lateral nearest to it; and the fore central eyes form a quadrangular figure whose fore side is the shortest; the interval between each two eyes of the foremost row is about equal to an eye's diameter.

The normal grooves and indentations on the cephalothorax are nearly obsolete; that indicating the junction of the cephalic and thoracic segments is marked by a short, deep, red-brown line.

The *sternum* is heart-shaped, yellow, and has some red-brown maculæ on the margin, opposite the insertion of the legs.

The *abdomen* is oval, of a dark, warm, purplish, red-brown colour, streaked and marked with the normal pattern of pale reddish yellow, and pretty thickly clothed with fine yellowish-grey hairs; the underside is of a more uniform purplish red-brown, with two parallel pale reddish-yellow lines along its centre; these lines do not reach the spinners.

The *epigyne* connected with the sexual aperture is of large size and very unusual and characteristic form; it is very strong and broad, directed backwards, and folded inwards at its extremity; the figure given (Pl. XIV. fig. 3) will give a better idea of this portion of structure, by which the species may be known at a glance from others closely allied in form, structure, and colour.

A single adult female was kindly forwarded to me in 1872 by Mr. J. W. Traill, of the University of Aberdeen.

Family DICTYNIDES.

Genus DICTYNA (Sund.).

DICTYNA LUGUBRIS, sp. n. Pl. XIV. fig. 4.

Adult male, length $1\frac{1}{2}$ line.

This spider is nearly allied to *D. globiceps* (Simon), which, as well as *D. benigna* (Bl., &c.) and several others, it closely resembles in general form and structure. It is, however, rather a larger species; and the caput is proportionally rather larger and more convex at the sides and occiput. The clypeus is impressed immediately below the eyes; but its lower margin is prominent and somewhat upturned or, rather, underhollowed; its height exceeds that of half the facial space. The colour of the cephalothorax is red-brown; and its surface is clothed with numerous short, greyish-white, somewhat squamose, bristly hairs.

The *eyes* are in the ordinary position, in two curved rows; the hinder row is the longest and most curved; and the extremities of the two rows meet by the lateral eyes (on each side) being contiguous to each other and obliquely seated on a small tubercle; the eyes of the foremost row appear to be equally distant from each other; but the two centrals of the hinder row are rather further from each other than each is from the lateral of the same row on its side; the four central eyes form a quadrangular figure, whose transverse is longer than its longitudinal diameter, and its fore side, though rather longer than the sides, yet shorter than the posterior side.

The *legs* are slender, moderately long, and of a dull yellowish-brown colour; the femora are darker than the tibiæ, the metatarsi and tarsi being pale dull yellow: their relative length appears to be 1, 2, 4, 3; and they are clothed with fine hairs.

The *palpi* are short, furnished with hairs, and of a dull brown colour; the radial is, if any thing, rather longer, but less strong than the cubital joint; it has no apophysis at its extremity; but on its outer sides, a little nearer to the posterior than to the anterior extremity, is a small, black, sharp-pointed, tooth-like spine or hook directed downwards; the digital joint is longer than the radial and cubital joints together, roundish oval at its base, but the anterior portion is rather drawn out. The palpal organs are not complex; they consist of a not very large, roundish, corneous lobe, from the base of which, rather on the outer side, a twisted or somewhat corkscrew-shaped corneous process extends backwards beneath the radial joint; and from the middle of the inner side a strong process curves round in a circular form in front of the principal lobe; and in close connexion with the superior margin of this process there appears to be a strongish black filiform spine.

The *falces* are very long, strong, and of peculiar form; they are generally rather prominent at their base in front, and have also an angular prominence there on the outer sides; looked at from the front, they are strongly curved from each other, being also much excavated on their inner sides; their extremities are broad, obliquely truncate, and flattened at the inner corners; they are also very prominent behind, towards the base, in the form of a strong, blunt-angular prominence; they are similar in colour to the cephalothorax; and the greater part of their surface in front and on the sides is furnished pretty thickly with small blackish tubercles, giving them a roughened granular appearance; their extremities have some bristly hairs near the fangs, which latter are neither very long nor strong.

The *maxillæ* and *labium* are of normal form, rather darker in colour than the falces; while the sternum is of a still richer hue, being of a dark coppery-brown colour; these parts are furnished with strong hairs, some of those on the sternum being greyish white.

The *abdomen* is black, with four small red-brown impressed spots or punctures, forming a quadrangular figure near the middle of the upperside, the fore side of the quadrangle being shortest; it is more or less thinly clothed with short greyish-white hairs: the spinners are brown, and in front of the inferior ones is the usual supernumerary mammillary organ, or united pair of spinners; those of the superior pair are less strong than the inferior, but have a small second joint.

The *colours*, as well as other specific characters, will serve to distinguish this spider easily from *D. benigna* (Bl.), *D. uncinata* (Westr.), and *D. pusilla* (Id.); while the granular surface of the falces especially, and other characters as well, will make it easily to be distinguished from *D. globiceps* (Sim.).

The female resembles the male in colours; but the caput is less massive, and the falces are of a more ordinary form, though the surface is (but not so strongly) granular: the metatarsi of the fourth pair of legs have each a strong calamistrum on their outer sides.

Several adult males and one female were found by myself on low herbage at Corfu in May 1864; and a single adult male was subsequently received from the late Mr. Richard Beck, by whom it was taken somewhere on the continent of Europe; but the locality is uncertain. Two examples of the male had the abdomen of a deep reddish-brown hue; and on one there was a faint appearance of darker markings; but I believe the usual colour may be taken to be black, as above described.

Family AGELENIDÆ.

Genus CÆLOTES (Bl.).

CÆLOTES PICKARDI, sp. n. Pl. XIV. fig. 5 a, d.

Adult male, length 4 lines.

This very interesting spider is exceedingly closely allied to *C. saxatilis* (Bl.), which it nearly resembles in size, form, and colours; it is, however, rather smaller than the average of the many examples of *C. saxatilis* (♂) which have come under my notice; it is also a darker-coloured spider, the dark-brown markings on the upperside and sides of the abdomen being in the present species much blacker, and the underside, which in *C. saxatilis* is invariably of an almost immaculate light yellow-brown, is in *C. Pickardi* strongly marked and suffused with black; the sternum also is deep black-brown, while in the other species named it is reddish yellow-brown; the cephalothorax also is of a deeper hue. But perhaps the strongest specific distinction, and one easily seen, is furnished by the form of the cubital joint of the palpus; in *C. saxatilis* (Pl. XIV. fig. 5, b, c) there is a strong apophysis at the outer extremity; but (when looked at from the outer side, as well as in some other positions) this apophysis has two angular prominences on its upperside, the one towards its base being the strongest; in *C. Pickardi*, however, the corresponding apophysis is totally destitute of any angular prominence; it is also rather longer and stronger, and tapers gradually, terminating in an obtuse point; it has likewise a slightly upward direction, while that of *C. saxatilis* is, if any thing, directed rather downwards; the apophysis also at the outer extremity of the radial joint is larger in this than in the present species; and some small differences are observable in the structure of the palpal organs.

A single adult male was contained in a small collection of Arachnida, kindly made for me in 1867, during a tour in Switzerland, by my cousin, the Rev. H. Adair Pickard, M.A., with whose name I have now great pleasure in connecting it.

Genus TETRRIX (Sund.).

TETRRIX MOGGRIDGII, sp. n. Pl. XIV. fig. 6.

Adult female, length $3\frac{3}{4}$ lines.

In form, general structure, and size, this spider is very like *T. lycosina* (Sund.); but it may be distinguished at once by the absence of any annulation on the legs or pattern on the cephalothorax, as well as by its generally paler and plainer colouring and the different design on the abdomen.

The *cephalothorax*, *legs*, and *sternum* are of a dull yellowish colour; the

former is very strongly constricted laterally forwards, the caput being produced, and broader at the fore margin than at the point of constriction, and the thorax round (oval when looked at from above). There is a strong dip or indentation in the profile line at the junction of the caput and thorax; and the junction of the thoracic segments is marked by a deeply impressed red-brown line; the other normal indentations are of a dusky hue: the caput has some long black bristles on its fore part directed forwards; and the rest of the cephalothorax has a few short fine hairs upon it: the height of the clypeus is less than half of that of the facial space.

The *eyes* are in two nearly concentric curved rows well separated from each other, the curves directed forwards, the hinder row being considerably the longest: the two central eyes of the hinder row are the largest of the eight, and are further from each other than each is from the hind lateral on its side; and a similar separation is observable between the eyes of the front row.

The *legs* are moderately long and rather strong, but not greatly differing in length; their relative length is 4, 1, 3, 2; they are of a dull yellowish colour, tinged with brown, and without any annulations or darker markings; they are furnished with longish hairs, bristles, and fine spines; and each tarsus ends with three claws.

The *palpi* are similar in colour to the legs, and are pretty well furnished with hairs and long spine-like bristles.

The *falces* are long and strong, a little directed backwards, prominent at their base in front, and of a deep reddish-brown colour.

The *maxillæ* and *labium* are of normal form, of a yellowish-brown colour, pale whitish at the extremities.

The *abdomen* is hairy, of a dusky blackish colour above, striated with lines of a pale dull hue on the sides; and on the fore part of the upperside in the central line is an elongate oblong marking of a pale dull colour, having a roughly angular prominent point about the middle on either side, and its posterior extremity strongly forked, branching off into an oblique bar on each side; this is followed by 2-3 angular bars or chevrons united at their apices, and decreasing in size towards the spinners: on each side of the elongate marking are two other irregular pale patches in a longitudinal and parallel line: on the underside the abdomen is of a dull whitish hue; and the sexual aperture is of peculiar and characteristic form; the spinners of the superior pair are two-jointed, long, and upturned, and of a pale dull yellowish-white colour.

A single adult female of this spider (which in the abdominal pattern greatly resembles spiders of the genus *Tegenaria*) was received early in the present year from Mentone, where it was captured, and kindly sent to me by J. Traherne Moggridge, Esq. As

far as I can ascertain, it seems to be of an undescribed and very distinct species, upon which I have great pleasure in conferring the finder's name.

Family THERIDIIDES.

Genus LINYPHIA (Latr.).

LINYPHIA LEPIDA, sp. n. Pl. XV. fig. 7.

Adult female, length $1\frac{1}{2}$ line.

The *cephalothorax* of this pretty species is yellow, margined with dusky blackish, the normal indentations, as well as a large wedge-shaped marking behind the eyes being suffused with sooty brown; in form it is of the ordinary type, though rather less convex, perhaps, than usual; the clypeus is prominent at its lower margin; and its height is rather greater than half that of the facial space.

The *eyes* are not very unequal in size, and are seated on strong black spots in the ordinary position; those of the hinder row are equidistant from each other; and those of the fore central pair (which are contiguous to each other) are separated from those of the hind central pair by about the same interval as that which separates the latter from each other; those of each lateral pair are seated obliquely, and contiguously to each other, on a tubercle.

The *legs* are slender and moderate in length; they are similar in colour to the cephalothorax, marked, however, slightly with blackish on the joints, and are furnished with hairs and fine black spines.

The *falces* are yellow, of moderate length and strength, a little prominent at their base in front, slightly divergent, and armed with but two or three very small, sharp, red-brown teeth near their inner extremities.

The *maxillæ* are strong, of normal form, yellow in colour, and a little inclined to the *labium*, which last is very short, and of a nearly semicircular form.

The *sternum* is heart-shaped and yellow, suffused with dusky black.

The *abdomen* is large, oval, very, but not excessively, convex above, and projecting over the base of the cephalothorax; it is of a dull ground-colour, pretty thickly blotched above and on the sides with irregular cretaceous yellowish-white spots; in the central line of the fore half of the upperside is an elongate, tapering, angularly margined, black band or stripe, reaching rather more than one third of the way towards the spinners; immediately following this are three black spots in a transverse line, after which, to the spinners, is a series of 6-8 angular lines or chevrons; the angles of these are broken, so that they form a double series of opposed, black, and some of them slightly curved, short, but distinct dashes; one pair of these dashes

(on the hinder part of the abdomen) forms a continuous transverse curved line, ending with a blotch at each extremity; no doubt these transverse bars vary in length and strength in different examples: each side has a strong irregular black patch on the middle; and the underside is dark brown, margined with black: the genital aperture is, like all of this genus, of peculiar structure, and has a prominent epigyne, with several small corneous-looking processes connected with it.

A single example of this very distinct *Linyphia* was received from Mr. J. W. Traill, by whom it was found near Dunkeld in 1872.

Family THOMISIDES.

Genus XYSTICUS (Koch).

XYSTICUS PAVESII, sp. n. Pl. XV. fig. 8.

Adult male, length rather more than $1\frac{1}{2}$ line.

In form and structure this very distinct and pretty species is of the ordinary type.

The *cephalothorax* is almost round, a little produced and constricted laterally before, and tolerably convex above; the hinder slope being gradual; its colour is brownish yellow tinged with orange, with two slightly darker longitudinal bands, one on each side, bearing a broad central longitudinal band, with a pale patch near the middle of it.

The *eyes* are on pale yellow-grey tubercles, in the ordinary position, of two parallel curved rows, the curves directed forwards, and the foremost row the shortest; the eyes of each row are as nearly as possible equidistant from each other; the four central eyes form a square, whose foremost side is rather shorter than the rest: the height of the clypeus is half that of the facial space.

The *legs* are moderately strong; those of the first and second pairs are long, much stronger than those of the third and fourth pairs; their relative length is 2, 1, 4, 3; they are furnished with hairs and spines; the colour of the first two pairs is yellow (tinged with brown), and the fore extremities of the tibial joints are of rather a deeper hue; the colour of the third and fourth pairs is pale yellow.

The *palpi* are short and not very strong; the cubital and radial joints are about equal in length, the former perhaps a little the longest; the latter has its fore extremity on the outer side produced into a moderately long, not very strong, slightly tapering apophysis, adhering closely to the side of the digital joint, and bifid at its extremity; also beneath the fore extremity of the radial joint is another moderately long, slightly curved, and obtusely pointed prominent apophysis; the

digital joint is oval, rather exceeding in length that of the radial and cubital joints together: the palpal organs are simple, and consist of a flattish corneous lobe; from their fore extremity a black, filiform, tapering spine issues, and, going first in an outward direction, coils completely round their margins, its fine point overlapping its origin.

The *falces* are moderately long, rather exceeding in length the height of the facial space, but not very strong; their colour is similar to that of the cephalothorax.

The *maxilla*, *labium*, and *sternum* are yellow; and their form is of the usual type.

The *abdomen* is of a broadish oval form, somewhat truncated before and roundish-pointed behind; its upper surface is flattish; and it projects well over the base of the cephalothorax; it is of a pale yellowish colour; the upperside is furnished with a few fine hairs, and is closely mottled with irregular, silvery-yellow metallic spots; and its fore half has the five usual small circular depressions or punctures, the sides being of a dark rusty red-brown marked with longitudinal, parallel, sinuous lines of minute yellow dots, the underside being whitish-yellow, and the square between the spiracular plates a bright but pale orange-yellow: the anal tubercle and superior spinners are of the same colour as the sides; the inferior spinners yellow.

A single example was received several years ago from the neighbourhood of Naples; and I feel much pleasure in naming it after Dr. Pietro Pavesi (of the University of Genoa), who has given a considerable amount of attention to the Araneidea of Italy.

Xysticus defectus, sp. n. Pl. XV. fig. 9.

Adult male, length rather more than 2 lines.

This spider, though so decidedly distinct from *Xysticus cristatus* (Bl. et al.), is yet so exceedingly similar in form, colours, and markings that the description of one would do fairly well for that of the other; it is, however, rather a larger spider; the colours of the cephalothorax are darker and richer; the dark, wedge-formed, longitudinal, central marking behind the eyes terminates *obtusely* behind, instead of in a point, which is invariably the case in *X. cristatus*; the femora and genua of the first two pairs of legs are of a rich black chestnut-brown, without spots or any pale lines, the remainder, together with the legs of the third and fourth pairs, being of a uniform dull yellow; the hairs also on the abdomen are shorter and rather stronger; and the dentated band along the centre of its upperside is darker-coloured and less distinctly defined, though of a very nearly similar form; and the abdomen itself is of a more regular oval shape, being rounder or less truncate before.

The *palpi*, however, give the most obviously distinctive character: the radial joint is short and equal to the cubital in length; it has two

strongish apophyses from its extremity, one on the outer side obtusely and roundly pointed at its termination, and shorter than the corresponding one in *X. cristatus*; the other, rather near it, but below, towards the underside of the joint, is the largest and a little the longest, slightly curved and squarely truncate at its extremity: the digital joint is rather smaller in proportion than in *X. cristatus*, and is prominent near the middle of its outer side, but wants the pale process there so strongly marked in that species; at least, this process in the present species is quite rudimentary: the palpal organs are well developed but simple, and entirely wanting the conspicuous, prominent, corneous, spiny processes so notable in *X. cristatus* (and other nearly allied species); they appear to consist merely of a large not very convex corneous lobe, with two or three inconspicuous, slightly curved, sharp-pointed spines near their fore extremity; the inner margin of the palpal organs is black, and either of a corneous fillet-like nature, or else this appearance arises from a closely fitting spine running round it; it was difficult to ascertain exactly which.

An adult female found at the same time and place so exactly resembles the normal *X. audax* and some varieties of *X. cristatus*, that possibly it may not be the female of the present species; no doubt, however, it will be very difficult to distinguish this sex from that of the two before-mentioned species.

The single male described was found by myself in June 1865 running actively on a bare spot on the mountain-side at Bruck am Main in Austria.

Genus MONASTES (Luc.).

MONASTES STANTONI, sp. n. Pl. XV. fig. 10.

Female (not quite adult), length $3\frac{1}{2}$ lines (nearly).

The *cephalothorax*, when looked at from above, is nearly round, truncate, and a little produced in front; it is moderately convex above; and the clypeus, which equals half the facial space in height, is very broad and projects considerably forwards at its lower margin, where there is a single transverse row of prominent bristles; the normal grooves and indentations are well marked; and there are a few prominent black bristles on the upper part: the colour is a pale greyish yellow-brown mottled with white, and spotted with small black spots.

The *eyes* are on large roundish tubercles, in two transverse, nearly parallel, slightly curved rows, of which the hinder is much longer than the front row; the two central eyes of the hinder row are nearer together than each is to the lateral of the same row on its side; and the same may be said of the two fore central eyes; the two end eyes of the hinder row on each side, with the fore lateral nearest to them, form an equilateral triangle.

Legs rather long, moderately strong; their relative length is 1, 2, 4, 3; they are of a pale greyish-yellow colour, washed or roughly striped (longitudinally) with white, and spotted with black; they are furnished with hairs; and the femora of the first pair, as also the tibiae and metatarsi of the third and fourth pairs, have some fine longish spines; each tarsus ends with two black curved claws.

The *falces* are greyish yellow, speckled with black, they project forwards, and are moderately long and strong, but apparently rather excavated where they meet the *maxilla*; these are long, narrow, a little curved, and inclined to the labium, which is of an oblong-oval form, round-pointed at its apex.

The *sternum* is heart-shaped, flattened, of a yellowish colour, mottled with white, and closely spotted with blackish spots.

The *abdomen* is (looked at from above) broader behind than before, and of a somewhat pentagonal form; its fore part projects greatly over the base of the cephalothorax; and from its hinder part rises a large eminence directed backwards and just over the end of the abdomen, and furnished above with black spines; the sides are strongly and longitudinally rugulose; and the whole has a wrinkled shrunken appearance; the colour of the abdomen is a mixture of dark and grey, white, greenish yellow-brown, and reddish yellow; a faint indication of a broadish, longitudinal, central, dentated band of a paler hue may be traced on the upperside; and the underside is of a dull whitish hue, with a broad, black-brown, longitudinal, central band.

Two examples (scarcely adult) were most kindly given me by H. T. Stainton, Esq., by whom they were captured, with some other interesting species, at Cannes, in the early spring of 1867; and it is with great pleasure that I connect his name with this very distinct and, I believe, undescribed spider.

Genus THANATUS (Koch).

THANATUS (PHILODROMUS, *Walck.* ad partem) MUNDUS, sp. n. Pl. XV. fig. 11.

Adult female, length $2\frac{3}{4}$ lines.

In form, colours, and general appearance, this spider is very like *T. setigerus* (Cambr.) found in Palestine; it is, however, larger, and differs in the form of the characteristic central, longitudinal, lanceolate marking on the fore part of the upperside of the abdomen; in the present species this marking terminates posteriorly in a narrow acute point, and is considerably and obtusely enlarged on each side at about its middle part, while in *T. setigerus* it is cut off behind in a straight transverse line, and the sides are merely very slightly angular.

The *cephalothorax* is clothed with hairs; and, looked at from above, is nearly round, the caput being produced at its fore part below; so

that the clypeus is prominent, and about equals in height half of the facial space, having its lower margin fringed with a row of close-set pale squamose hairs ; it is of a yellow-brown colour, two broad longitudinal bands (one on each side) being of a deeper hue ; the space between these dark lateral bands has a long narrow wedge-shaped marking of the same colour, beginning behind the hind central eyes and terminating in a point at the hinder margin ; on the fore part of this marking are three narrow, longitudinal, dark-brown stripes, the central one being the longest ; the space on each side of the wedge-shaped marking is thickly clothed with whitish hairs, some of a similar nature being also on the marginal bands : the caput and clypeus have some long, strong, black, prominent, spine-like bristles ; among these are several others less strong, and of a pale diaphanous appearance. The normal converging grooves are indicated by darker lines than the surrounding surface.

The *eyes* are small and in the ordinary position, forming two transverse, nearly parallel, curved rows, the curves directed forwards ; the front row is greatly the shortest and most curved ; the interval between the eyes of the hind central pair is smaller than that between each and the hind lateral nearest to it, that between the eyes of the fore central pair being a little greater than that between each and the fore lateral nearest to it ; and the interval between the two fore lateral eyes is a little greater than that between each and the hind lateral nearest to it.

The *legs* are long and tolerably strong ; their relative length appeared to be 2, 4, 1, 3 ; they are of a brownish-yellow colour, furnished with hairs, black bristles, and spines, the finer hairs having a whitish hue ; each tarsus terminates with two black curved claws and a claw-tuft beneath them.

The *palpi* are moderately long and similar in colour and armature to the legs.

The *falces* are moderate in length and strength, of a pale yellow-brown colour, and furnished on their uppersides with a few longish, prominent black bristles.

The *maxilla*, *labium*, and *sternum* are normal in form ; they are of a yellow colour tinged with brown, and furnished with black bristles.

The *abdomen* is oval, moderately convex above, of a greyish yellow-brown colour, dotted with hairs and spiny bristles ; of the former there are many of a pale colour and squamose nature, mostly disposed rather in tufts or groups on the hinder part and sides ; the spiny bristles are prominent, strong, and obtuse at their extremities ; most of those on the middle and towards the fore part of the upperside are black ; those on the sides and hinder portion are for the most part whitish and diaphanous : on the fore part of the upperside, in the central longitudinal line, is a strong and conspicuous, nearly black, velvety-looking

marking, narrowly margined with whitish, obtusely enlarged on either side a little past its middle point; and its hinder extremity draws in suddenly, and then terminates narrowly, tapering to a sharp point; from either corner, where it draws in, there is an oblique, short, dark dash, forming the anterior boundary of a broad tapering band, which reaches to the spinners, and is of a dark yellow-brown colour, having several deeper angular lines along its middle; the sides and underside are brownish yellow, the former rather the darkest. The genital aperture is of a somewhat oblong form, wider behind than in front, with dark, shining, reddish-brown, lateral margins.

The armature of the abdomen will distinguish this spider at once from *Philodromus (Araneus) formicinus* (Clk.), as also will the form of the large marking on the fore part of the upperside as well as the character of the other markings; it has no lateral black or dark patch, as in *P. setigerus*, from which also other peculiarities (as above noticed) separate it.

A single example of this very interesting spider was kindly brought to me from Mentone in March 1867 by H. T. Stainton, Esq.

Genus *PHILODROMUS* (Walck.).

PHILODROMUS TORQUATUS, sp. n. Pl. XV. fig. 12.

Adult male, $1\frac{3}{4}$ line.

This species is allied to *P. aureolus* (Walck.), but its much smaller size, as well as its strikingly different colours and the structure of the palpi, will serve to make it easily distinguishable in the adult state.

The *cephalothorax* is of the ordinary form, the clypeus projecting and exceeding in height half that of the facial space: the sides and clypeus are of a deep, rich, black chestnut-brown, leaving a broad longitudinal space on the upperside; the hinder half of the space is of a brownish-yellow colour, slightly mottled with a darker line; on the fore half there is a large crescent-formed, collar-like, pale cream-coloured marking; its convexity is directed backwards; and it has two dark blotches, one near each horn of the crescent, and two small dark spots in a short transverse line near its hinder extremity; between this and the eyes the colour is like that of the eye-area and clypeus, with a pale brownish-yellow band along the middle, having its posterior termination in the extreme concavity of the crescent above mentioned; this band has on it two parallel, longitudinal, dark-brown lines.

The *eyes* are small, very nearly of equal size, and in the ordinary position, but forming a rather narrower (and so longer) crescent-formed figure; six of them form a long transverse curved row; and between the two extreme eyes of this row, but within the straight line formed by them, are two more; these two are further from each other

than each is from the extreme eye (mentioned before) on its side ; the two centrals of the front row are also nearer to each other than each is to the one next to it on its side.

The *legs* are long, rather slender, of a yellowish-brown colour, the femora being strongly marked longitudinally with a much darker colour than the rest, nearly as dark as the sides of the cephalothorax ; they are furnished sparingly with hairs, and with spines of different lengths ; their relative length appeared to be 2, 1, 4, 3.

The *palpi* are moderately long and similar in colour to the legs, the hinder part of the humeral joint being darker than the rest ; the radial and cubital joints are short ; the former is the shortest, and has a small, pointed, curved apophysis beneath its fore extremity, rather on the outer side ; the digital joint is rather large, of an oval form, and longer than both the radial and cubital joints together : the palpal organs are very simple, and not prominent ; they have a rather strong, curved, sharp-pointed, corneous process curving round their fore extremity, the sharp point being on the outside.

The *falces* are moderate in length and strength, of a subconical form, and (looked at in profile) directed backwards ; they are, as also are the *maxille*, *labium*, and *sternum*, of the same colour as the cephalothorax.

The *abdomen* is oval, rather broader behind than in front, where it is truncated, and projects over the base of the cephalothorax ; the colour is a dark purplish yellow-brown ; and on the fore half of the upperside is a large oblong white patch, along the longitudinal centre of which is the ordinary characteristic marking, of a larger size than usual, its sides irregularly notched or dentate, and its colour as dark as that of the cephalothorax ; towards the hinder part of the sides of the abdomen are a longitudinal series of three curved, narrow, white bars, each one decreasing in length and strength behind the other ; between these, along the middle of the hinder part of the abdomen are three curved, pale greyish, obscure, angular bars or chevrons ; immediately behind the oblong white patch on the fore part, and in a transverse line, are two largish circular depressions of a deeper hue than the rest of the surrounding surface ; the underside is rather paler than the upperside, and has some obscure, pale, longitudinal, broken, parallel lines ; the spiracular plates are cream-coloured.

Probably the females and immature, or lately matured, males will be found to approach very nearly in colour and markings to *P. aureolus* and *P. cespiticolis*.

Two adult males were found by myself on low plants at Corfu in May 1865.

EXPLANATION OF PLATES XIV. & XV.

- Fig. 1. *Ecobius ionicus*, sp. n., ♂.
a, spider, in profile, without legs; *b*, ditto, from above; *c*, eyes, from behind and above; *d*, left palpus, from the outer side, rather in front; *e*, natural length of spider.
- Fig. 2. *Ariadne ionica*, sp. n., ♂.
a, spider, in profile; *b*, caput, showing eyes; *c*, maxillæ and labium; *d*, left palpus, from outer side; *e*, natural length of spider.
- Fig. 3. *Clubiona voluta*, sp. n., ♀.
a, spider (without legs), from above; *b*, ditto, in profile; *c*, *d*, epigynæ from above and in profile; *e*, natural length of spider.
- Fig. 4. *Dictyna lugubris*, sp. n., ♂.
a, spider, in profile; *b*, caput and falces, from the front; *c*, left palpus, from the front; *d*, natural length of spider.
- Fig. 5. *Celotes Pickardi*, ♂.
a, left palpus, from outer side; *d*, natural length of spider; *b*, left palpus, from outer side, of a closely allied species (*Celotes saxatilis* (Bl.)); *c*, natural length of spider.
- Fig. 6. *Textrix Moggridgii*, sp. n., ♀.
a, spider, from above; *b*, ditto, in profile, with legs truncated; *c*, genital aperture; *d*, natural length of spider.
- Fig. 7. *Linyphia lepida*, sp. n., ♀.
a, spider in profile; *b*, ditto, upperside; *c*, *d*, genital aperture and epigynæ, from above and in profile; *e*, natural length of spider.
- Fig. 8. *Xysticus Pavesii*, sp. n., ♂.
a, spider, from above; *b*, left palpus, from underneath; *c*, right palpus, from above and behind; *d*, dimensions, showing natural length and extent of legs.
- Fig. 9. *Xysticus defectus*, sp. n., ♂.
a, spider, upperside; *b*, left palpus, from above; *c*, natural length of spider.
- Fig. 10. *Monastes Staintoni*, sp. n., ♀.
a, spider, from above; *b*, ditto, in profile, with legs truncated; *c*, fore part of caput and eyes, from above and behind; *d*, natural length of spider.
- Fig. 11. *Thanatus mundus*, sp. n., ♀.
a, spider, from above, legs truncated; *d*, ditto, in profile; *c*, genital aperture; *d*, natural length of spider.
- Fig. 12. *Philodromus torquatus*, sp. n., ♂.
a, spider, from above, legs truncated; *b*, ditto, in profile; *c*, caput and falces, from the front, showing the eyes; *d*, natural length of spider.



